HYDR*IM*® L110w G4

Operator's Manual

SciCan | Your Infection Control Specialist™

HYDR*IM* L110w G4 Operator's Manual 95-113645 Rev. 1.0. Copyright 2013 SciCan Ltd. All rights reserved.

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1. Introduction

Thank you for selecting the HYDR*IM* L110w G4 instrument washer. The HYDR*IM* complements the STAT*IM*® and BRAVO™ autoclaves by quickly and hygienically preparing soiled instruments for sterilization. To ensure years of safe, trouble-free service, carefully review this Operator's Manual before operating the unit. The HYDR*IM* L110w G4 is suitable only for the applications listed in this manual. Using the HYDR*IM* for other purposes may be dangerous. The manufacturer cannot be held responsible for damage caused by improper use.

Operational, maintenance and replacement instructions must be followed for the product to perform as designed. All trademarks referred to in this manual are the property of their respective owners. Contents of this manual are subject to change without notice to reflect changes and improvements to the HYDR*IM* product.

The HYDR*IM* L110w G4 should only be installed and serviced by a qualified contractor as it is an Installation Category 2 device. Before connecting the unit, the installer should check that the voltage and frequency of the electrical supply correspond with the details in the installation instructions. The unit must only be plugged into a grounded outlet. Please note that this unit is completely isolated from the electrical supply only when it is unplugged or the circuit breaker is turned OFF. This must be done before any repair work is carried out.

The HYDR*IM* L110w G4 uses HIP™ Cleaning Solution exclusively. The unit will not perform as described if other detergents / cleaning products are used. Other detergents / cleaning products may damage the unit, the instruments, cause excessive foaming, and void the warranty. Do not use solvents in this unit. Do not allow small children or unauthorized personnel access to this unit or its controls.

2. Important Information

The following symbols appear in this book.

Caution, there is a potential hazard to the operator.

This situation may lead to a mechanical failure.

This is important information.

3. Disclaimers

Do not permit any person other than authorized personnel to supply parts for service or maintenance for your HYDR*IM*. SciCan is not liable for incidental, special or consequential damages caused by any maintenance or services performed on the HYDR*IM* by unauthorized personnel, or for the use of equipment or parts manufactured by a third party, including lost profits, any commercial loss, economic loss, or loss arising from personal injury.

Never remove any unit panels and never insert objects through holes or openings in the cabinetry. Doing so may damage the unit and/or pose a hazard to the operator.

If the unit is used in a manner other than that specified, the protection provided by the equipment may be impaired.

Cleaning solutions may irritate. Avoid contact with eyes, skin and mouth.

Never sit, stand or lean on the open door. The unit may tip forward causing injury.

Always turn the unit OFF before adding softener salt, adding solutions or performing routine maintenance to the unit.

The owner shall not allow any personnel other than the trained and authorized personnel to operate the unit.

SciCan recommends leaving the unit turned ON at all times, in particular over times when no staff is in the office or when no water shut-off mechanism is installed. Leaving the unit turned ON will activate the drain pump if water is leaking into the chamber as a result of any faulty circumstance.

For further information or questions about the HYDR*IM* L110w G4, contact your authorized dealer.

4. Installation Instructions

To open the wash chamber door, plug in the unit, turn it on and press the unlock symbol.

Alternatively, remove the screw in the kickplate and pull the ring. See section 5.28.

Tools and supplies required for installation:
- Slot screwdriver
- Channel locks

Specifications:

Voltage:	208 – 240 V
Frequency:	60 Hz
Rated load:	2.5 kW
Circuit breaker:	15 A per phase

Height:	850 mm / 33.5”
Width:	600 mm / 23.75”
Depth:	600 mm / 23.75”
Depth with door open:	1200 mm / 47”
Weight:	80 kg / 176 lbs
Max. Running Noise: 78 dBA	

Utility Hook-ups

Hose / Cord	Length / Diameter	Max. Distance Distance from inlet / drain	Water Pressure	Shut-off valve
Hot Inlet	1.9 m / 6 ft. 3/4”	1.5 m / 5 ft.	1-10 bar / 14.5-145 psi	Yes
Cold Inlet	1.9 m / 6 ft. 3/4”	1.5 m / 5 ft.	1-10 bar / 14.5-145 psi	Yes
R/O Inlet	1.9 m / 6 ft. 3/4”	1.5 m / 5 ft.	1-10 bar / 14.5-145 psi	Yes
Drain	1.5 m / 5 ft. 3/4”	—	—	—
Electrical	1.8 m AWG 14-3	—	—	—

Levelling the HYDRIM:

The unit is standing on three supports: rollers (wheels) at the back and two legs at the front.

1. Remove the front kickplate. Push the HYDR*IM* into place while lifting the strap at the front to allow the unit to roll on the rollers.
2. Adjust the front legs as required until the HYDR*IM* is level.
3. The rear two legs are used only if the floor is uneven or cannot provide support to the rollers.
4. Tuck the strap under the machine before replacing the kickplate, so as not to interfere with the exhaust air vents.

Installation:

Installation should be undertaken by a SciCan approved technician. The use of an unapproved installer may invalidate the warranty.

If the HYDR*IM* is installed in a Sterilization Center, the manufacturer of the Sterilization Center should allow a 10mm / 1/2” space at the top, back and both sides of the HYDR*IM*. This will facilitate installation, and service access to the HYDR*IM*.

Do not move the HYDR*IM* into place by maneuvering the open wash chamber door. This may cause to door to become misaligned and leak.

During installation, all consumables should have been added to the machine as appropriate. It is important that this be done before starting the machine.

For safety reasons, do not install the HYDR*IM* without the top cover.

Rear of Unit

4. Installation Instructions

Connecting the water inlet hoses:

Connect the hot and cold water inlet hoses to the hot and cold water supply.

Drain requirements:

Connect the drain hose to the drain outlet. The drain hose can be attached to existing drain lines using a 3.5 cm / 1.5” or larger standpipe / P-trap combination. If the hose is connected directly to the drain line, fittings and adapters should not reduce water flow. The drain hose should be attached to the main drain at a point no more than 1 metre /3 ft. above the base of the HYDR*IM*. A floor drain is acceptable (check local codes).

Electrical requirements:

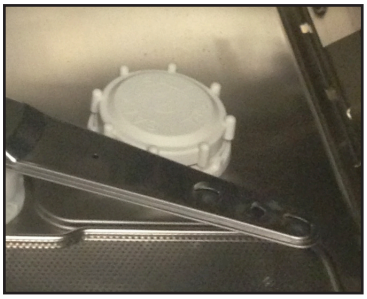
Connect the electrical cord to the power supply. The HYDR*IM* must have a dedicated circuit equipped with a 15A fuse. The outlet must be grounded.

Additional Information:

- The HYDR*IM* unit is heavy. Use a forklift or dolly and exercise caution when moving it.
- The HYDR*IM* should be serviced on site.
- The HYDR*IM* is equipped with an air gap / anti-suction device to prevent backflow of dirty water into the water supply. No other air gap device is necessary.
- If you need to extend the water inlet and drain hoses, ensure that you use commercial grade plumbing hose.
- The maximum length of the drain hose is 3.3 m / 13 ft.

Installing the water softener salt:

Unscrew the salt container lid and pour 1 litre / 1 quart of water into the water softener. Add 1 kg / 2.2 lbs of water softening salt in the same manner. Screw the salt container cap on tightly.



Handling and installing the HIP™ cleaning solution

The HIP™ cleaning solution is used in dilute form as a detergent for the cleaning of surgical instruments in the HYDR*IM* range of washers and washer disinfectors. It is a colourless and almost odourless liquid which is completely soluble in water.

The pH range of the concentrated solution is between 9.3 to 9.8 and the solution is therefore alkaline. It is therefore advised that certain precautionary measures are observed when handling and during the loading of the solution into the machine, and when removing and disposing of the empty box.

4. Installation Instructions

Recommended precautionary measures with regard to safe handling of HIP™ cleaning solution.

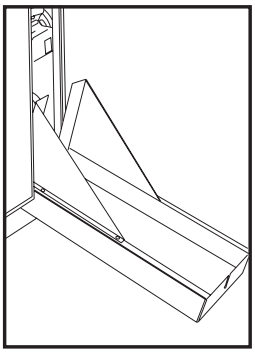
- Always wear undamaged gloves made of natural or butyl rubber, nitrile, or neoprene (Surgical gloves are ideal).
- Always wear eye protection.
- Protect exposed skin on arms.
- If solution is spilled on clothing, remove the item of clothing and wash affected skin with plenty of water, in accordance with the Material Safety Data Sheet requirements.
- Use good industrial hygiene practices in handling this material. When handling, do not eat or drink.
- After handling the product, remove and dispose of gloves and wash hands prior to removing eye protection.
- Do not use the personal protective equipment you use for clinical activities to handle HIP™ products.
- Always ensure that personal protective equipment, if contaminated with HIP™ cleaning solution, is cleaned, or disposed of as appropriate.

For comprehensive data on HIP™ cleaning solution, please visit SciCan.com to view or download a PDF of the Material Safety Data Sheet.

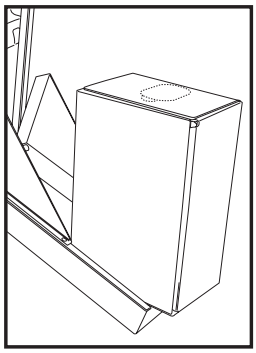
To install the HIP™ cleaning solution box, follow these steps:

Installing Cleaning Solution:

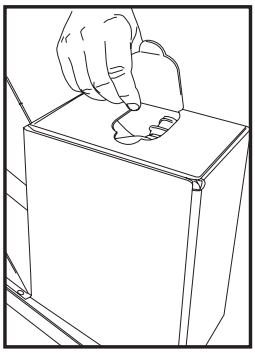
Install HIP™ Cleaning Solution as follows:



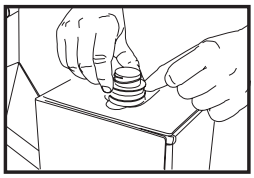
Open the cleaning solution drawer.

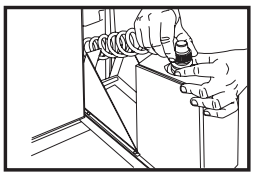


Put a new cleaning solution box into the drawer upside down.

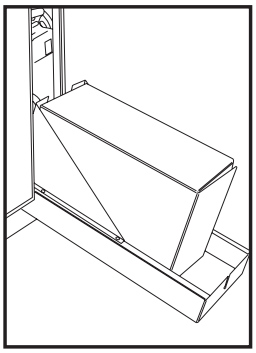


Tear open the tab.





Pull out the spout and remove the protective cap. Connect the hose.



Place the box in the cleaning solution drawer and then close.

Technician Installation Test: Turn on the shut-off valves. Run a cycle, checking for leaks in the plumbing connections.

4. Installation Instructions

Water quality

The quality of the water being used in the HYDR*IM* to clean the instruments is very critical to achieving satisfactory cleaning results and to protecting the instruments and the internal parts of the unit from deterioration.

Drinking water typically contains many dissolved solids. The amount of dissolved solids greatly depends on the local natural geological conditions and they can cause stains, spots and corrosion on instruments and on the internal parts of the HYDR*IM*. Among others, Iron, Manganese, Chloride, and Calcium Carbonate ($CaCO_3$) are the dominant dissolved solids that affect the cleaning results when using a washer.

Iron and Manganese can cause orange and brown or black stains on the instruments and on the internal parts of the HYDR*IM*. Chloride is usually responsible for causing stains, spotting, pitting and scaling. If the instruments or the inner parts of the HYDR*IM* L110w G4, such as the chamber, show any of these spots or stains, a water test may be required to determine the cause. The installation of a water treatment system may be required to reduce the amount of dissolved solids in the water and to improve the cleaning performance of the HYDR*IM*.

Calcium Carbonate is the principle cause of water hardness and leaves white spots or scales. The HYDR*IM* is equipped with a built-in water softening system that must be adjusted according to the local water hardness. Please see the next section of this manual for recommended regeneration settings.

Before using the HYDR*IM*, SciCan recommends testing the water and recording the results for water hardness, pH value, and water conductivity for future reference.

IMPORTANT: The HYDR*IM*'s water softening system reduces the water hardness by taking out Calcium Carbonate. If your water testing results show that your water hardness is outside the unit's range of adjustment, or if other dissolved solids in the water cause stains or deposits on the instruments or chamber, an external water treatment system may be required.

4. Installation Instructions

Testing water quality

The HYDR*IM* L110w G4 is equipped with a built-in water softening system that must be adjusted according to the local water hardness. To read local water hardness, proceed as follows:

1. The water test kit included with your HYDR*IM* contains three water hardness test strips in bags. Take a water sample from the location where the machine will be installed.
2. Open one of the bags, remove the test strip and dip it into the water.
3. Compare the color of the strip with the chart on the back of the bag Determine the water hardness according to the chart on the water test kit envelope.
4. Power the unit on and select the Settings key from the main menu.
5. Go to the Setup Menu and select “Set Regeneration”.
6. Using the up and down arrows, set the water softener regeneration level according to the water hardness table in this section. If your water hardness falls between two settings, select the higher setting.
7. Unscrew the water softener container lid from the bottom right of the chamber and pour at least 1.0 litres (0.26 gal) of water into the water softener container. Then fill the salt container to the top (maximum 1 kg/ 2.2 lbs.) with salt. Close by screwing the lid **tightly** back into place and run a complete cycle with no instruments. An improper seal can lead to corrosion.

Water Hardness Conversion and salt regeneration levels

	°dH	US GPG	PPM (mg CaCO3 / Litre)	Regen.
Typically No Treatment Necessary (values from 18-143)	1	1.0	18	1
	2	2.1	36	
	3	3.1	54	
	4	4.2	71	
	5	5.2	89	
	5.6	5.8	100	
	6	6.3	107	2
	6.2	6.4	110	
	7	7.3	125	
	8	8.3	143	
May Require External Treatment (values from 150-535)	8.4	8.8	150	3
	9	9.4	161	
	10	10.4	178	
	10.1	10.5	180	
	11	11.5	196	
	11.2	11.7	200	4
	11.8	12.3	210	
	12	12.5	214	
	13	13.6	232	
	14	14.6	250*	
	15	15.6	268	5
	16	16.7	286	
	16.8	17.5	300	6
	17	17.7	303	
	18	18.8	321	
	19	19.8	339	
	19.6	20.5	350	7
	20	20.9	357	
	20.2	21.0	360	
	21	21.9	375	
	22	22.9	393	
	22.4	23.4	400	
	23	24.0	411	
	24	25.0	428	
	25	26.1	446	
	25.2	26.3	450	8
	26	27.1	464	
	27	28.2	482	
	28	29.2	500	
	28.6	29.8	510	
	29	30.2	518	
	30	31. 3	535	
External Treatment Required (values >535)	≥30.3	≥31.6	≥540	Additional Water Treatment Required

*Please note: The water test strip is only accurate up to 250 ppm. If the reading on the test strip exceeds 250 ppm and/or if the location in which the HYDR*IM* is installed has known water quality problems, having a more detailed and accurate water test done by a test lab is strongly recommended.

5. Instructions for Use

5.1 Instrument Reprocessing Recommendations

The HYDR*IM* L110w G4 is designed to clean general dental and medical instruments.

Terminal sterilization MUST follow processing in the HYDR*IM* L110w G4.

Prior to placing instruments in the HYDR*IM*, consult the instrument manufacturer's reprocessing instructions.

Examples of medical and dental instruments suitable for cleaning in the HYDR*IM* L110w G4 include:

- Stainless steel scalers, spatulas and hemostats.
- Stainless steel retractors, needle holders, skin hooks, tissue forceps, scissors, curettes, and other stainless steel instruments free of deep cavities.

For best results, instruments processed in the HYDR*IM* L110w G4 should have the following properties:

- Heat resistance to a temperature of up to 70°C / 158°F
- Corrosion resistance in the presence of heat and alkalinity.

! Burs, microkeratomes, phaco tubing, fiberoptics and electrical equipment should not be processed in the HYDR*IM*.

! Nickel-plated instruments, or instruments containing aluminum or colour anodized aluminum as well as single use instruments are not suited for processing in the HYDR*IM*.

! HIP™ (HYDR*IM* Cleaning Solution with Instrument Protection) has been carefully formulated to provide outstanding material compatibility with a wide range of metals and coatings. However, some manufacturers' instruments or instrument coatings may not be compatible.

! Please consult the instrument manufacturer for their recommended cleaning procedures. In general, it is not recommended to process carbon steel and chrome plated instruments in the HYDR*IM.*

! All hinged instruments should be placed in open position in open baskets or in the hinged instrument rack (SciCan part number 01-110409S) in P3 Heavy-Duty cycle.

! When processing small or light objects in the HYDR*IM* use the basket with lid (SciCan part number 01-109966S).

! Only the outer surfaces of dental handpieces can be cleaned in the HYDR*IM* L110w G4 with the handpiece holder (9 handpieces, PN 01-113113S or 21 Handpieces, PN 01-113112S).

! Set-able materials, such as cements, amalgam, and composites need to be removed from the instruments after use at chairside. The HYDR*IM* will not be able to clean them off the instruments.

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5. Instructions for Use

5.2 Cycle Description Chart

Cycle	Prewash	Wash	Rinse	Dry	Total Time** w/o Drying	Water Consumption
P0 – Machine Cleaning Cycle No initial draining.	<30°C/86°F (cold) 3 minutes	N/A	<30°C (cold) 2 minutes	N/A	7 minutes	16 L 4.23 Gal
P1 – Rinse and Hold Cycle* Use to prevent soil from drying on instruments when they will not be washed within one hour.	<30°C/86°F (cold) 3 minutes	N/A	60°C/140°F 1 minute	N/A	17 minutes	16 L 4.23 Gal
P2 – Regular Cycle (no disinfection) – Use for moderately soiled loose instruments.	N/A	50°C/122°F 5-15 minutes (default 5 minutes)	60°C/140°F*** 1-10 minutes (default 1 minute)	1-20 minutes (default 10 minutes)	25 minutes	24L 6.34 Gal
P3 – Heavy Duty Cycle Use for heavily soiled instruments and cassettes.	<30°C/86°F (cold) 3 minutes	50°C/122°F 5-15 minutes (default 9 minutes)	60°C/140°F 1 minute	1-20 minutes (default 10 minutes)	34 minutes	32L 8.45 Gal

* This is not a wash cycle. Always run a wash cycle following the rinse & hold cycle.

** Cycle times depend on the temperature and pressure of incoming water.

*** Rinse times are adjustable up to 10 minutes by an authorized technician.

5. Instructions for Use

5.3 Hints and tips for best cleaning results

Remove all cement, composite material and amalgam from instruments at chairside prior to processing in the Hydrim.

- Use only accessories, such as baskets, cassettes, trolleys and racks to hold instruments that are designed for the HYDR*IM* L110w G4.
- Use accessories for their intended purpose only. For example, do not place hinged instruments in cassettes. Use the hinged instrument rack instead.
- Disassemble instruments if possible.
- Do not overlap instruments. Each instrument must be kept separate.
- All instruments must be placed in the instrument washer in such a way as to allow good rinsing of all surfaces. Any surface that is shielded from water and detergent cannot be cleaned.
- Open hinged instruments widely when placed in baskets or hinged instrument rack (PN 01-110409S). Closed hinged instruments cannot be cleaned.
- Place suction tubes in the rack for vertical instruments and ensure that water can flow unrestricted in and out of the tubes. Do not place suction tubes horizontally in a basket or in a cassette. For instruments containing lumens, such as dental handpieces, only the external surfaces are cleaned.
- Place trays and other concave shaped items at an angle to ensure water can run off surfaces easily.
- Do not overload the HYDR*IM*.
- Verify the Hydrim setup:
  – Ensure that the washer spray arms are free of any blockage and can rotate freely.
  – Ensure that the mesh filters in the chamber drain are free from debris.
- To achieve best cleaning results, instruments should be processed in the HYDR*IM* as soon as possible. If immediate cleaning is not possible, it is recommended to process the instruments using the P1 Rinse and Hold program immediately after use on the patient.
- Visually inspect instruments for cleanliness and integrity (corrosion, material changes) after cleaning and repair or replace instruments if necessary.
- If process enforced is activated, the operator must confirm that the instruments are visually clean after a complete cycle is finished.

5. Instructions for Use

5.4 Recommended load configurations

The intended purpose of the L110w G4 washer is a clinical general instrument washer, predominantly aimed at the general dental and medical markets. There will be many combinations of instruments that can be processed in the L110w G4 unit depending on:

- Size of practice
- Types of procedures undertaken at any one time
- Specialization of practice
- Instrument management protocols

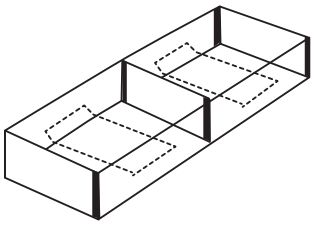
It is difficult to illustrate all the possible combinations available, so below we have given examples of the most common typical basket loadings, the recommended loading of general instruments, and the worst case loading, for which the unit has been type tested and validated.

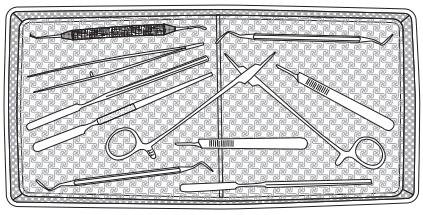
! Handle all instruments with care to prevent personal injuries through punctures for example. Follow local health and safety regulations for preventing accidents, bodily harm and personal injuries.

! Observe the instrument manufacturer's recommendations for cleaning and care. When loading the unit, arrange loose instruments so that they do not touch one another. Instruments with concave surfaces or cavities should be placed so that water can drain freely.

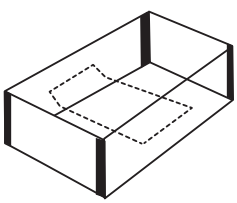
Sample loading:

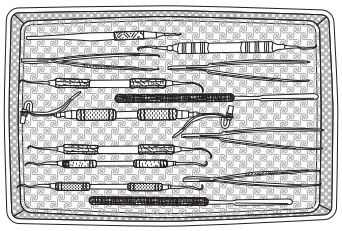
Example 1 – solid straight & hinged instruments





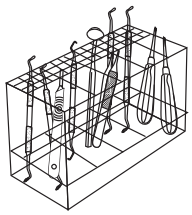
Example 2 – solid straight instruments



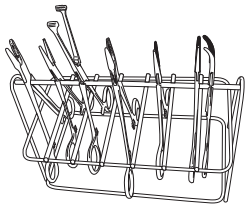


5. Instructions for Use

Example 3 – hinged instruments, solid instruments and open hollow instruments

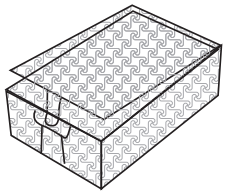


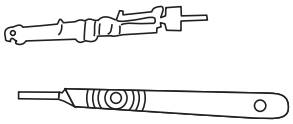
For example:
Scalers, curettes, dental elevators, single part mirrors, suction tubes etc.



For example:
Rongeurs, forceps, scissors etc.

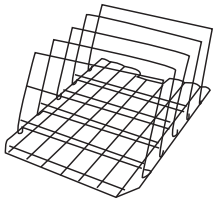
Example 4 – small & disassembled instruments

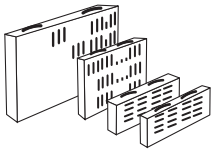


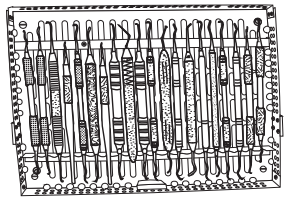


For example: Two piece mirrors, scalpel knife handles, etc.

Example 5 – instrument sets in cassettes – full load

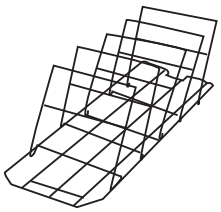


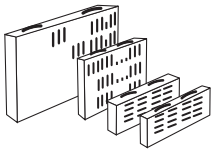


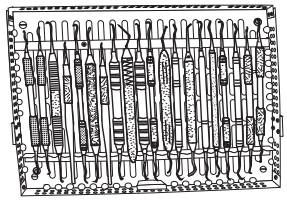


For example: Bone files, pluggers, curettes, excavators, etc.

Example 6 – instrument sets in cassettes – half load

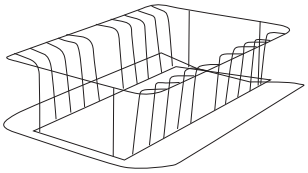


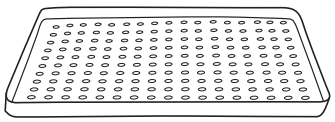


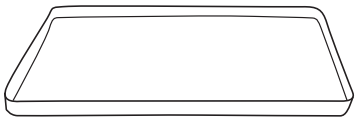


For example: Bone files, pluggers, curettes, excavators, etc.

Example 7 – instrument trays



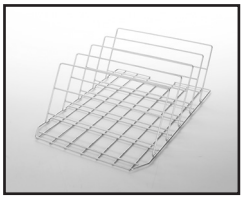




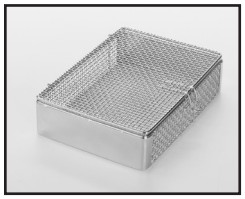
5. Instructions for Use

5.5 Baskets and Accessories

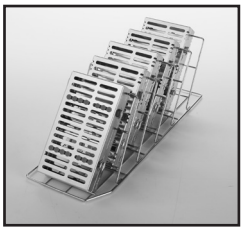
The following are included with the HYDR*IM*:



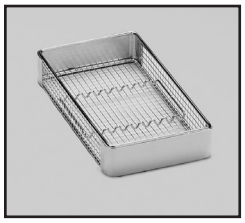
Rack for five 8” x11” cassettes, for upper or lower trolley. Full size (1/1).
Part-number
01-109963S



Basket with lid.
Quarter size (1/4).
Part-number
01-109966S

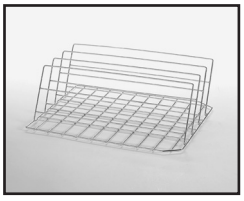


Rack for five medium size cassettes, for upper or lower trolley. Half-size (1/2).
Part-number
01-109964S

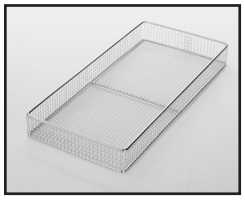


Hygiene basket for loose instruments.
Quarter size (1/4).
Part-number
01-109967S

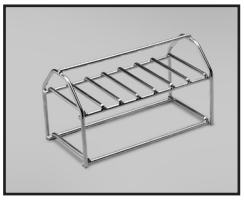
The following are optional:



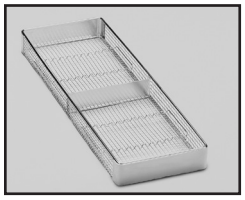
Rack for four 11” x 14” cassettes, for upper or lower trolley. Full size (1/1).
Part-number
01-109965S



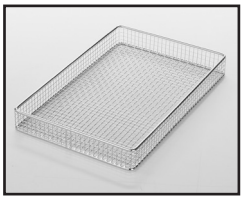
STAT*IM* 5000 basket.
Part-number
01-107241



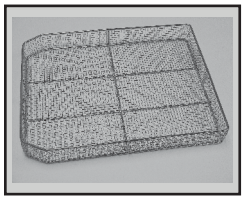
Hinged instrument rack.
Part-number
01-110409S



Long Basket.
Part-number
01-108232



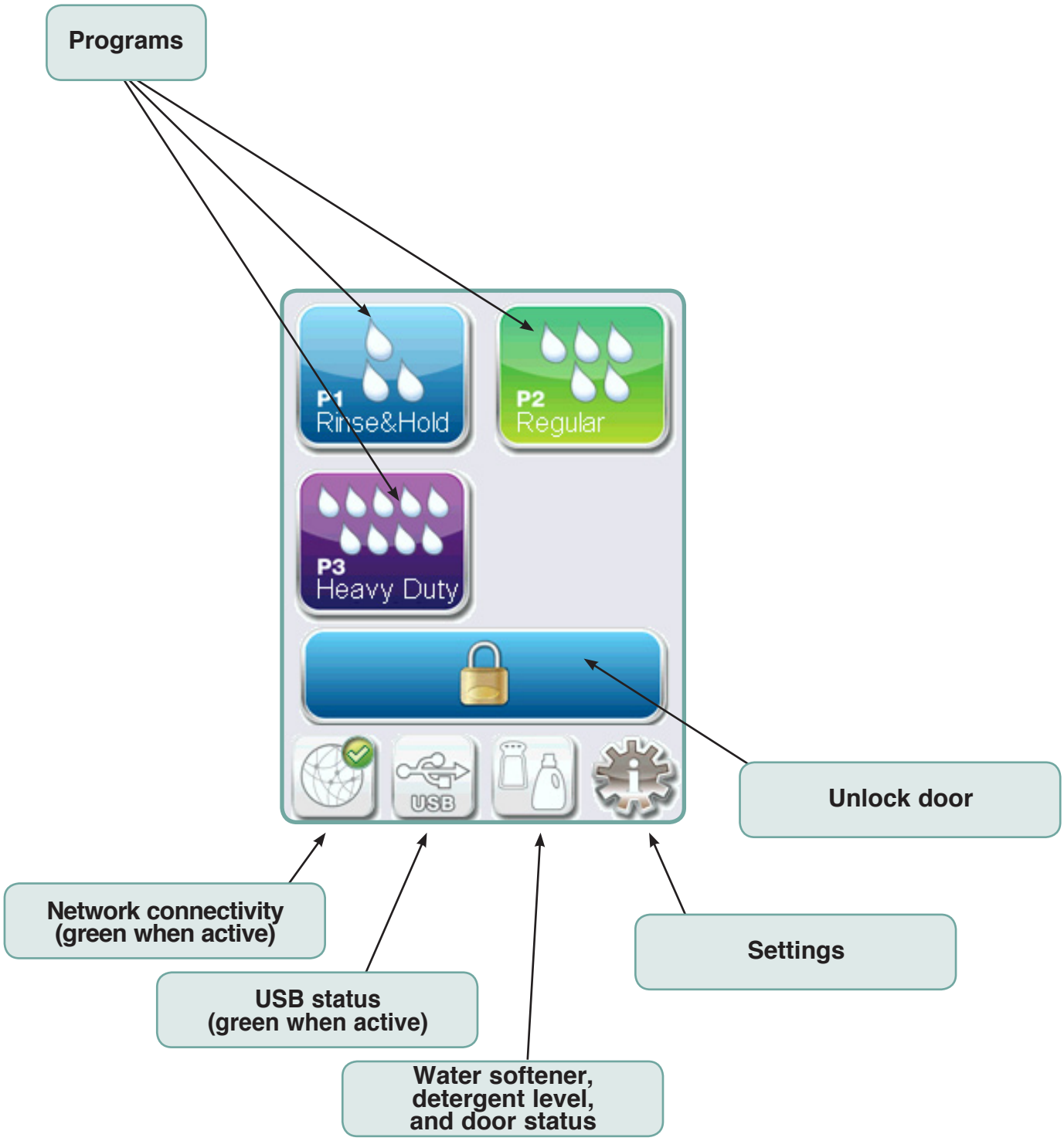
STAT*IM* 2000 basket.
Part-number
01-107240



Full Size Basket.
Part-number
01-111598

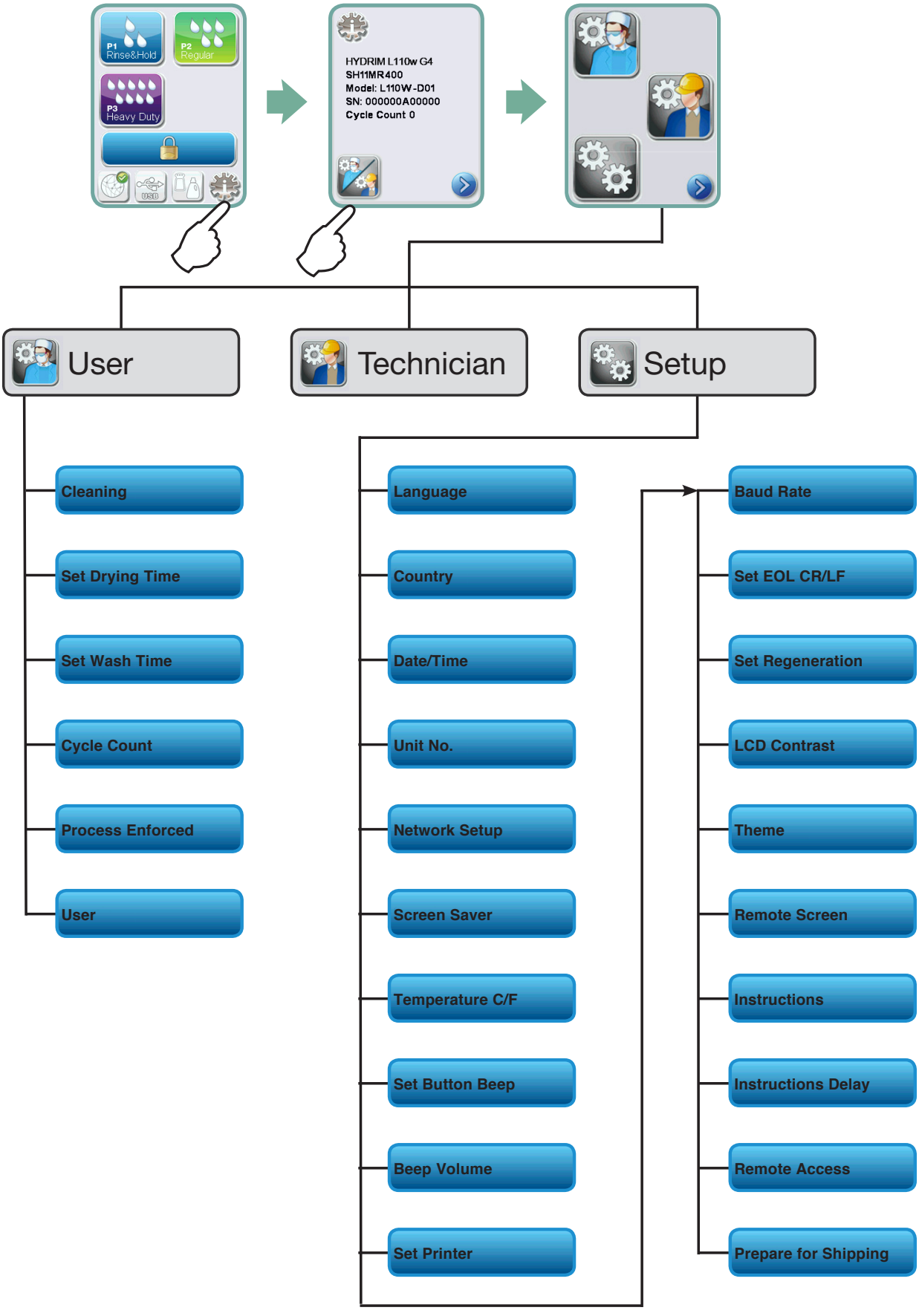
5. Instructions for Use

5.6 Touchscreen overview



5. Instructions for Use

5.7 Set up menu overview



5. Instructions for Use

5.8 Setting the language

The messages displayed by your HYDR*/M* can be presented in a number of different languages. To change the current language, follow these steps:

1.
2. Scroll to **Language** and select.
3. From the LANGUAGE screen, press to scroll through the list of languages. When you have found the desired language, press to save your selection and return to the Setup menu.

5.9 Setting the country

1.
2. Scroll to **Country** and select.
3. Using the keypad, type the name of the country and press **EN** to select. Press to save and return to the Setup menu.

5.10 Setting the time

1.
2. Scroll to **Date / Time** and select TIME.
3. From the TIME screen, use the keypad to set the time. Press **EN** to save and to return to the Setup menu.

NOTE: If the HYDR*/M* is connected to a network, it is important to also enter the correct Time Zone. Enter the Time submenu, select Time Zone and scroll and select your local time zone.

4. To change your unit to display 12-hour time format (24-hour time format is the default setting), go to the Setup menu and use to scroll to TIME 12/24, select it and toggle to 12. Press to save and return to the Setup menu.
5. To activate daylight savings time (DST), go to the Setup menu and use to scroll to DST ON/OFF and select. Use to toggle DST ON or OFF and press the to save and return to the Setup menu. If connected to the network, the time will automatically adjust to DST.

5. Instructions for Use

5.11 Setting the date

1. **Date / Time**
2. Scroll to **Date / Time** and select DATE.
3. From the DATE screen, use the keypad to set the date. Press **EN** to save and to return to the Setup menu.
4. To change the format in which the date appears, return to the Setup menu and use to scroll to DATE FORMAT. Select it, and follow the prompts to have the date displayed in the desired format. Press to save and return to the Setup menu.

5.12 Assigning unit identifier number

1.
2. Scroll to **Unit No** and select.
3. Using the keypad, select a maximum of 3 digits to be used as the unit's identifier number. Press **EN** to save and to return to the Setup menu.

5.13 Adjusting the screensaver delay

To change the length of time before the screensaver is activated, follow these steps:

1.
2. Scroll to **Screensaver** and select.
3. Use to scroll through your time options. When you have found the amount of time you require, press it. Press to save and return to the Setup menu.

5.14 Adjusting the temperature display

1.
2. Scroll to **Temperature C/F** and select.
3. Use to choose between having information displayed in degrees Celsius or Fahrenheit. Press to save and return to the Setup menu.

5. Instructions for Use

5.15 Turning the button sound ON or OFF

The HYDR*IM* is preset to beep when a button is pressed. If you would like to turn the button sound off, follow these steps:

NOTE: Turning OFF the button sound does NOT turn off other alarms and cycle notification beeps.

1.
2. Scroll to **Beep ON/OFF** and select.
3. Use to scroll through your ON or OFF options and select it by pressing it. Press to save and move back to the Setup menu.

5.16 Adjusting the button beep volume

If you would like to adjust the beep volume, follow these steps:

1.
2. Scroll to **Beep Volume** and select.
3. Use to scroll through the volume settings. Select the one you want by pressing it. Press to save and move back to the Setup menu.

5.17 Adjusting the salt regeneration

Salt regeneration should be set according to the local water hardness. See section 4 Testing Water Quality for instructions on determining correct settings. To set salt regeneration, follow these steps:

1.
2. Scroll to **Set Regeneration** and select.
3. Use to change the value. The default setting is 1. Press to save and return to the Setup menu.

5. Instructions for Use

5.18 Adjusting the screen contrast

The touchscreen is calibrated for the lighting condition of most sterilization centers. Should you need to adjust the contrast for your office, follow these steps:

1.
2. Scroll to **LCD Contrast** and select.
3. Use to scroll through your contrast options. When you have found the contrast you require, press it. Press to save and return to the Setup menu.

5.19 Changing the touchscreen display themes

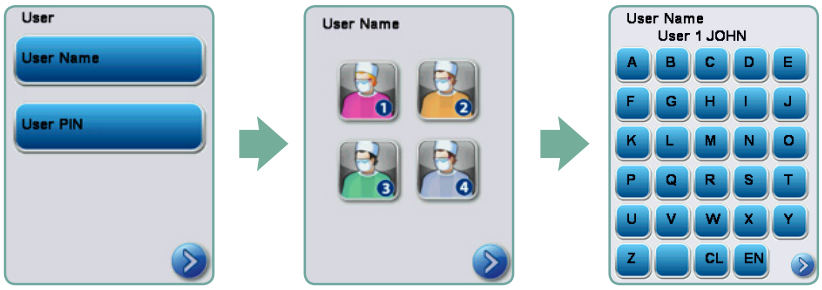
The touchscreen themes (i.e. icons and background colours) can be changed to one of the preset options. To change themes follow these steps:

1.
2. Scroll to **Theme** and select.
3. In the **Change Theme** screen, use to scroll through your available options. As you scroll, each theme will display on the touchscreen. Press to select your theme and return to the Setup menu.

5.20 Creating a User Name

Up to four unique User Names can be created. To assign a User Name follow these steps:

1.
2. Scroll to **User** and select.
3. To assign a user name, select **User Name** and use the alphabetic keypad to enter a name (up to 12 characters) and press **EN** to save.



5. Instructions for Use

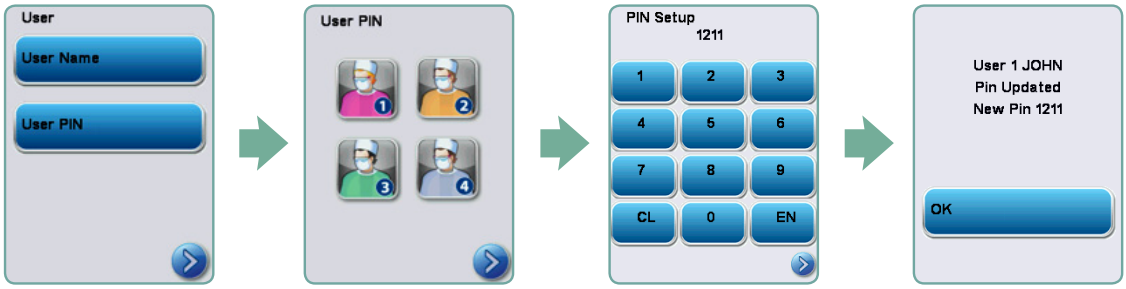
5.21 Creating a User PIN

From the User PIN screen, you can assign up to four PINs. To assign a PIN, follow these steps:

1.

2. Scroll to **User** and select.

3. To assign a user PIN, select **User PIN** and use the numeric keypad to enter a number (up to 4 digits) and select **EN** to save and to move to the confirmation screen.



5. If all of the information presented in the confirmation screen is correct, press OK to be returned to the User PIN screen. To make a correction, select the User PIN you want to change and repeat the process described above.

5.22 Setting up process enforced usage

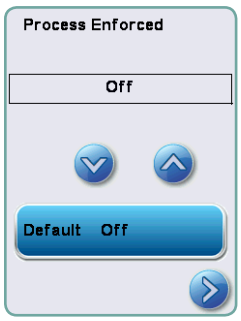
When process enforced usage is activated, users are required to enter a PIN at the end of a cycle. For process enforced usage to function, User IDs and PINs must first be assigned. To set up User ID and PINs, refer to sections 5.19 and 5.20 on creating a user name and PIN. To activate process enforced usage, follow these steps:

1.

2. Scroll to **Process Enforced** and select.

3. Use to toggle process enforced function ON or OFF. Press to save your selection and return to the Setup menu.

NOTE: Any user can stop a cycle even with process enforced usage ON. However, the cycle data will record that an unauthorized user has stopped the cycle.



5. Instructions for Use

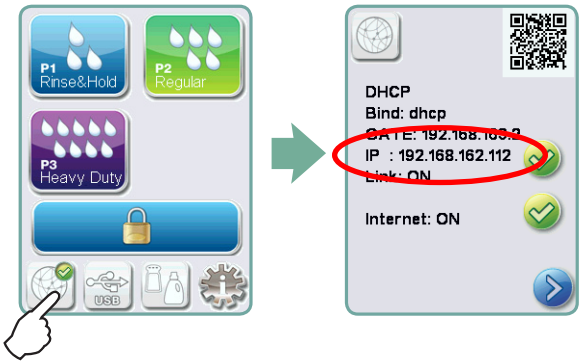
5.23 Connecting to a network

The HYDR*IM* L110w G4 has a 10/100Base-T Ethernet port located at the back of the unit. To connect your HYDR*IM* to a network using a router, follow these steps:

1. Connect your network cable to the Ethernet port at the back of the unit. If your office uses a router, the router should automatically assign the unit an IP address. A red X on the network icon means the unit is not connected. A yellow check mark means the unit has an IP address but is not connected to the Internet and cannot send emails. A green check mark means the Internet connection is set up properly and the unit can send out emails.

! **NOTE:** In some circumstances, where you do not have a router, for example when using Windows Network Sharing, you may have to assign a dedicated or 'static' IP address. To assign a static IP address, contact your local network administrator.

2. From the main screen, press the Network icon. The Network screen displays information about your HYDR*IM*'s connectivity, including its IP address.

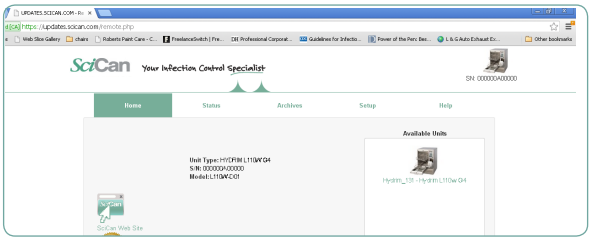


3. Type the IP address displayed on the touchscreen into the browser of any web enabled device to access your unit's web portal. When the Network icon is active (for example when sending email) it will turn green.

NOTE: Use QR code if connecting to a mobile device.

NOTE: Connection time will vary depending on your network speed, and making an initial connection can take longer.

In Canada and USA you can call our network support line at 1-800-635-5179 for additonal networking support.



5.24 Connecting to a wireless network

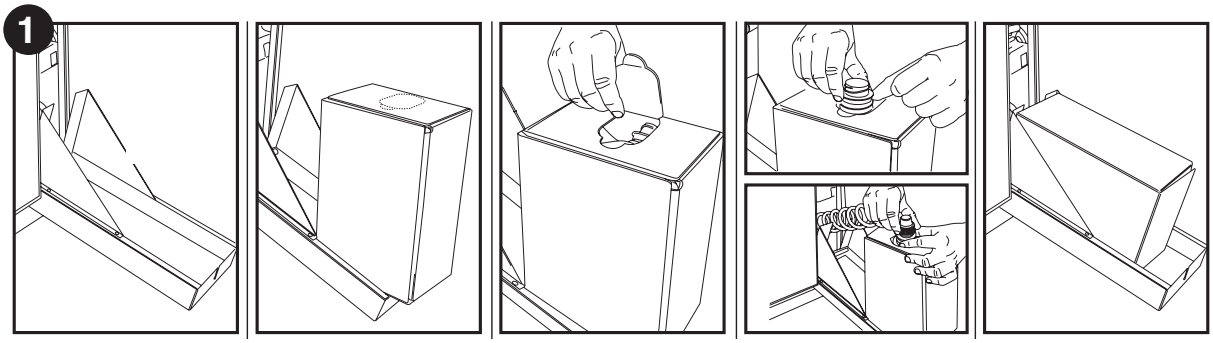
The HYDR*IM* can be configured for wireless use by connecting the Ethernet port to an external wireless bridge / access point. SciCan currently recommends the use of the D-Link® DAP-1522 Xtreme N® Duo Wireless Bridge. Contact your network administrator to learn more about setting up a wireless bridge.

5. Instructions for Use

5.25 Activating the HYDRIM L110w G4

Prior to activating the washer, check that the water supply is on and follow these steps:

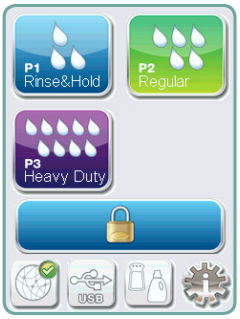
1



Open the chemical door and ensure that a box of HIP™ Cleaning Solution has been installed.

2

Turn the unit on.



3

Touch the screen to begin.

4

Press to unlock door.

5

Load instruments into the baskets or cassettes, place them in the machine and close the door.

6

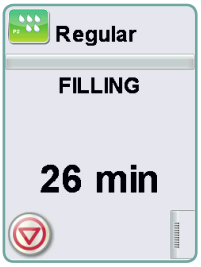
Select the desired cycle.

(Use a heavy duty cycle for cassettes, hinged instruments or heavily soiled instruments.)

7 Press START.

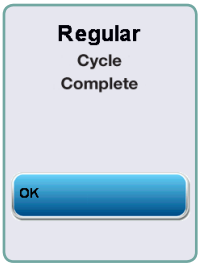
5. Instructions for Use

8 The cycle will begin.



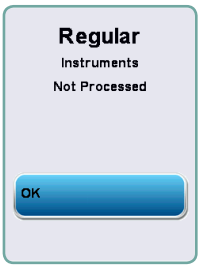
The cycle will start by draining the unit. The bar on the screen indicates the progression of the cycle. The stage within the cycle is shown beneath the bar (e.g. Filling, Rinsing). The estimated time remaining (in minutes) is always displayed. Please note that the time will increase or decrease depending on the projected cycle completion.

9 The cycle is complete.



When the cycle is complete, the program name and “Cycle Complete” is displayed, and the unit beeps three times. Press “OK” to open the door. Use gloves to unload the instruments. After all cycles, exercise caution as the instruments, trolley, baskets and cassettes may be hot. Inspect the instruments for debris prior to packaging / sterilizing.

5.26 Interrupting / aborting a cycle



The door of the HYDR*IM* is locked during the cycle. If the STOP button is pressed, the cycle is aborted and cannot be re-started. The message “Draining. Please wait” will appear. The unit will drain. Then the message “Instruments not processed” will appear. Press OK. Open the door by pressing . Use gloves if handling the instruments. Exercise caution as instruments, trolley, baskets and cassettes may be hot. The cycle must be repeated to ensure that instruments are properly processed.

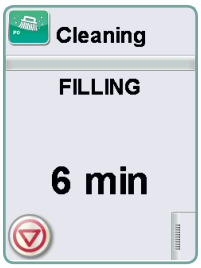
!

NOTE: If the drying phase of the cycle is interrupted, the critical parts of the cycle are complete and the message displaying the program name and “Cycle Complete. Drying interrupted” will appear.

5. Instructions for Use

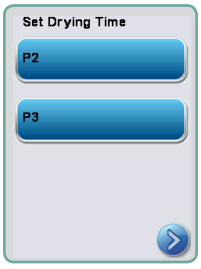
5.27 Additional user and setup menu functions

To access the user or setup menus, follow these steps:



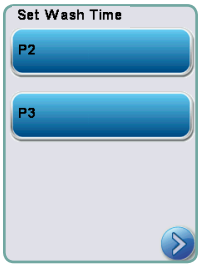
Chamber cleaning

This cycle is used to periodically remove hardwater deposits from the chamber walls and racks. Pour 1.0 litres (0.26 gal) of vinegar into the chamber before starting the cycle. Touch “cleaning.” A cleaning cycle, similar to a normal wash cycle, will run. Failure to clean chamber can promote corrosion.



Set drying time

The drying times for P2 and P3 can be set independently. Touch the cycle for which you want to set the drying time. Use the up and down arrows to select the desired drying time. Touch “default” if you wish to return to the factory default. Use the back arrow to return to the previous screen.



Set wash time

The wash time for P2 and P3 can be set independently. P2 and P3 cycles can be adjusted from 5 to 15 minutes. Touch the cycle for which you want to set the wash time. Use the up and down arrows to select the desired wash time. Touch “default” if you wish to return to the factory default. Use the back arrow to return to the previous screen.

Cycle count

This allows the user to see how many cycles have been run on the HYDR*IM*. Touch cycle count and the number of cycles (completed and aborted) will be displayed. This cannot be reset. Touch the back arrow to return to the previous menu.

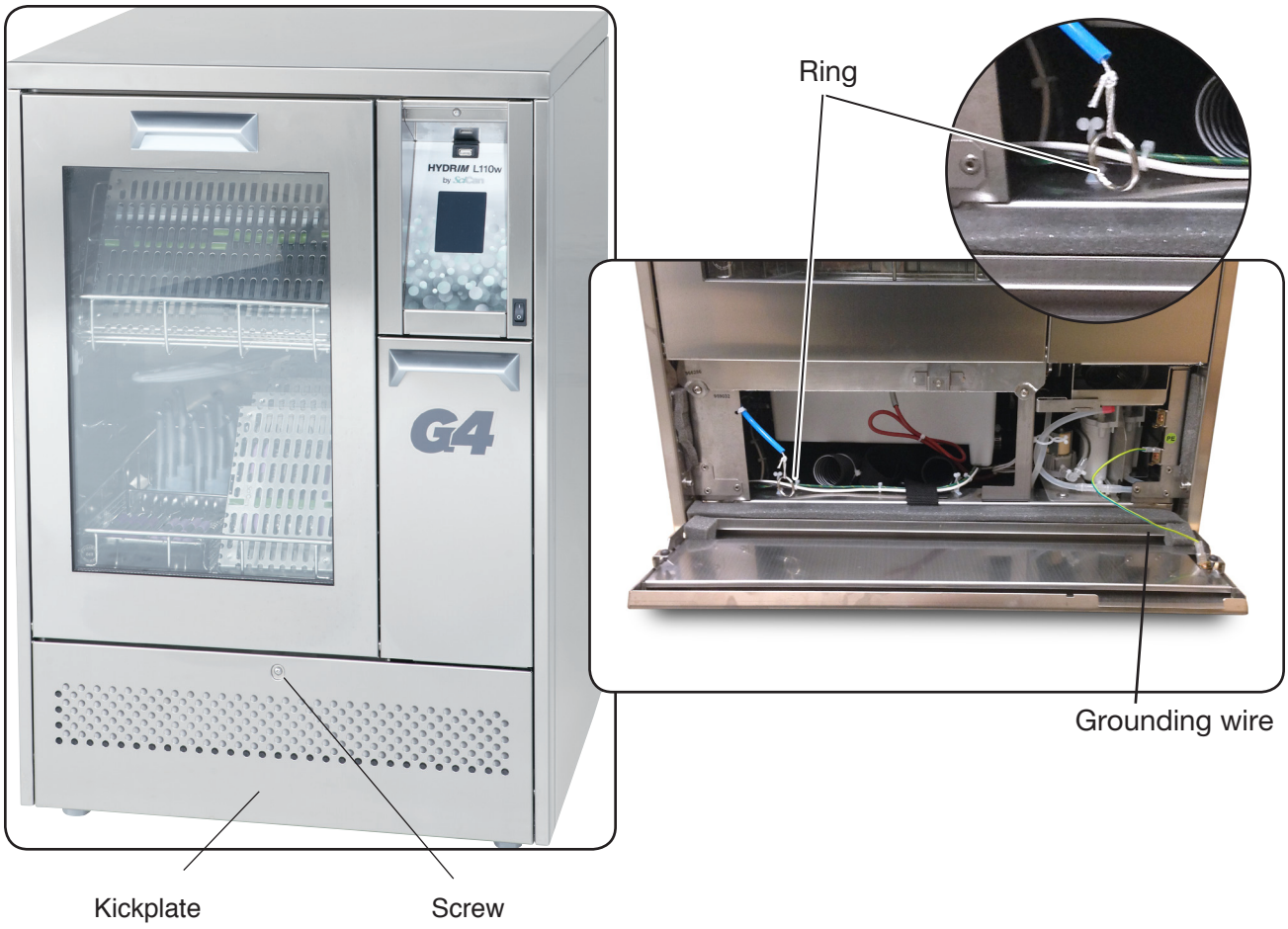
Instructions

Users can access a database of pictorial instructions on how to perform routine maintenance such as installing the cleaning solution.

5. Instructions for Use

5.28 Opening the Door in Case of Power Failure

If there is a power failure, remove the kickplate of the HYDR*IM*. Remove the screw with a screwdriver and lift the kickplate up and toward you. Locate the ring and pull it to open the door. Exercise caution! There may be fluid remaining in the unit and the instruments may be hot. Instruments that have not completed the cycle should not be used and should be reprocessed. When replacing the kickplate, ensure that the grounding wire is attached.



5. Instructions for Use –

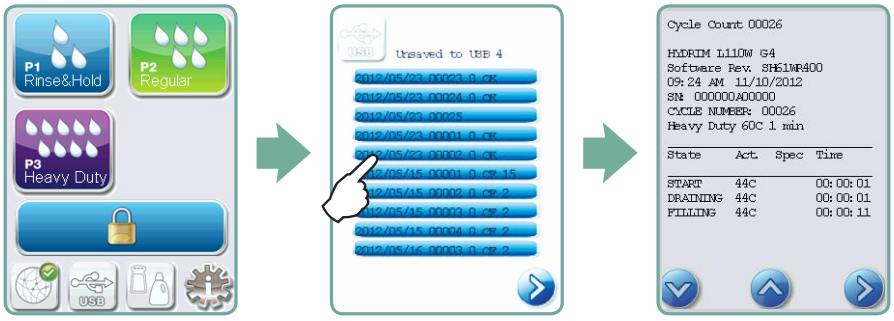
5.29 Storing and Retrieving Cycle Information

The HYDR*IM* L110w G4 has an internal Data Logger capable of storing all the data on every cycle, whether successful or incomplete, for the lifetime of the unit. You can access this information through the touchscreen, through the web portal or by using a USB storage device.

Retrieving cycle information using the touchscreen

1. From the main menu, press the USB icon.
2. The unit will record up to the last five successful cycles and the last five incomplete cycles.

   If you select a cycle from the list, it will display cycle information in a format similar to how it would be printed.



3. Use the arrow keys to scroll through and read.

NOTE: Regardless of whether you have a USB storage device attached to the unit or not, you can always see the last five successful cycles and the last five incomplete cycles.

Use the HYDR*IM* L110w G4 web portal to access all the cycle information stored on your Hydrim from your computer. To connect your HYDR*IM* see section 5.23 Connecting to a Network.

5. Instructions for Use –

Retrieving cycle information using the USB data back up

The USB storage device can be used to transfer cycle information stored in the unit to a computer. Best practice suggests this should be done once a week. To transfer data using the USB port, follow these steps:

1. Plug the USB storage device into the USB port.
2. The HYDR*IM* keeps track of what data has already been transferred to the USB storage device and will automatically load only new data. Data stored in the internal memory of the HYDR*IM* can be copied once only. Access to previously transferred information can be made from the web portal.
3. When the activity light on your USB storage device stops blinking or the USB icon on the LCD turns from a flashing green to a solid grey, remove the USB storage device and transfer the information to your computer.

! **NOTE:** If you select the USB storage device icon from the main menu, you will only be able to view the last five complete cycles and the last five incomplete cycles. To view all the cycles stored on the USB storage device, you must use your computer.

NOTE: If you lose your USB storage device and would like to transfer your unit's cycle history to a new device, follow these steps:

1. Plug the new USB storage device into the USB port.
2. Select the USB icon.
3. From the cycle information screen, select the USB icon again.
4. Select Copy and the unit will copy all cycle information to the USB storage device.

5. Instructions for Use –

5.30 Printer / Data Logger Setup

The HYDR*IM* L110w G4 has an RS-232 port at the back, and can be used with an external printer or the SciCan Data Logger. The printers in the chart below have been tested with the HYDR*IM.* To add or change a printer or SciCan Data Logger, follow these steps:

Turn off the HYDR*IM* and the printer or Data Logger before connecting these devices to the unit.

1. With the printer or Data Logger connected, turn on the HYDR*IM* and press the ***i*** to move to the Menu screen.
2. In the Setup Menu, select Printer Selection.
3. Select Serial Printer if connecting a printer, or USB Flash/MSD if connecting the SciCan Data Logger. Press the back arrow to return to the Setup Menu.
4. In the Setup Menu, select Baud rate.
5. Select the rate required (refer to chart below for recommended Baud rates). Use the back arrow to return to the Start screen.

Printer Model	Serial Port Baud Rate
Epson TM-U220D (C31C515603)	9600
Citizen IDP-3110-40 RF 230B	9600
Star Micro SP212FD42-230	9600
Star Micro SP216FD42-230	9600
Star Micro SP512MD42-R	9600

SciCan Data Logger	Serial Port Baud Rate
For Mass Storage Device	9600

6. Ensure that the date and time have been set (see Setup Menu – Date / Time)
7. Now the HYDR*IM* will write its cycle information to the device chosen.

6. Care and Maintenance

6.1 Replacing the HIP™ Cleaning Solution

The HYDR*IM* L110w G4 uses a 3.8L / 1 gallon container of HIP™ Cleaning Solution (Part number CS-HIPL). Use only the recommended cleaning solution and read the MSDS before inserting into the unit.

HIP™ cleaning solution is used in dilute form as a detergent for the cleaning of surgical instruments in the HYDR*IM* washer. It is a colourless and almost odourless liquid that is completely soluble in water. Some precautions must be taken to safely handle this chemical. For more information, see Chapter 4 Handling and Installing the HIP™ cleaning solution.

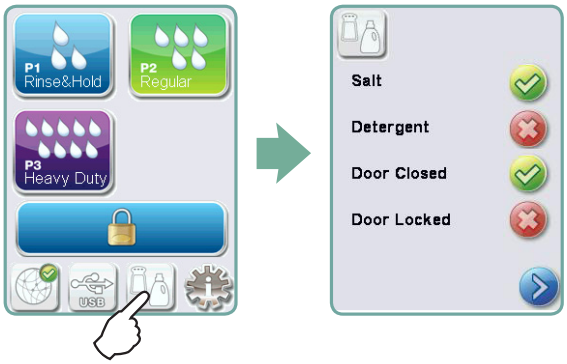
NOTE: To avoid spillage, replace the solution container only when the message appears and be sure to wear gloves.

When a red X appears on the water softener/detergent icon. Press on the icon to determine if the problem is with the water softener or cleaning solution level. If the cleaning solution must be replaced, a red X will appear next to it.

To order additional HIP™ Cleaning Solution, contact your local dealer. When the message “no detergent” appears on the screen, the cleaning solution container is empty and is in need of changing. To avoid spillage, replace the solution container only when the message appears and be sure to wear gloves.

NOTE: Each cleaning solution container will last approximately 30 cycles, depending on which cycles are used.

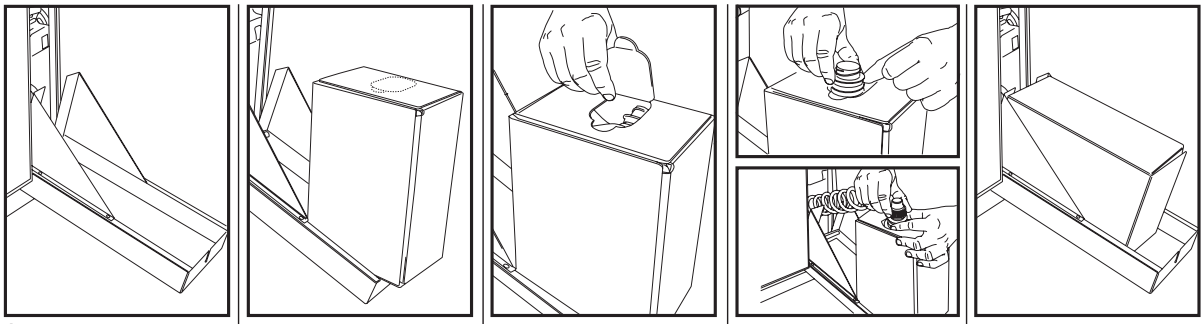
To replace the cleaning solution container, follow these steps:



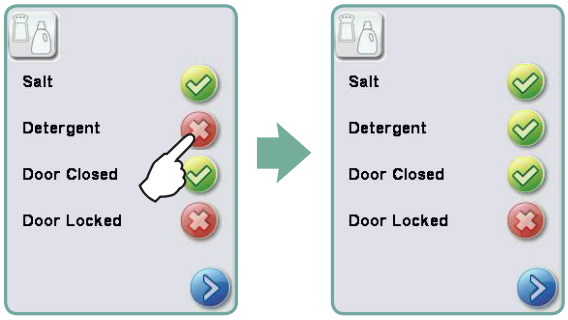
1. Turn the power switch OFF.
2. Open the cleaning solution door.
3. Disconnect the cleaning solution connector. Remove any dried chemical by immersing the connector in a cup of water.
4. Remove the empty cleaning solution container and discard or recycle.

6. Care and Maintenance

5. Connect new container and insert into the cleaning solution compartment. Follow the instructions printed on each cleaning solution container.
6. Close the door.
7. Turn the power switch ON



To prime the cleaning solution dosing pump, press the water softener/detergent icon on the main screen. In the water softener/detergent screen, press the red X next to “Detergent”. The unit will prime the dosing system and a green check mark will appear in place of the red X when it is ready for use.



NOTE: The system can also be primed by simply starting a cycle and selecting “Detergent Replaced”, when prompted.

6. Care and Maintenance

6.2 Refilling the Water Softening Salt Reservoir

When a red X appears on the detergent and water softener level indicator, press on the icon to determine if the problem lies with the water softener or cleaning solution level. If the water softener must be refilled, follow these steps:

To fill the salt reservoir, follow these steps:

1. Unscrew the salt container lid.
2. Fill the salt container to the top (maximum 1 kg / 2.2 lbs.)
3. Screw the salt container lid on tightly.
4. Run a complete cycle, with no instruments.

6.3 Cleaning the HYDR*IM* L110w G4

To clean outer surfaces and the decal covering the touchscreen, use a soft cloth moistened with soap and water or a surface disinfectant. Do not use harsh cleaning chemicals.

6. Care and Maintenance

6.4 Filter and Wash Arm Maintenance

Filter Maintenance:

Inspect the filter in the bottom of the chamber ***daily*** for debris and clean if necessary. To clean, remove the filter, rinse under a tap and replace. Ensure that the filter is firmly locked into position when replaced.

Wash Arm Maintenance:

If the wash arms are not turning easily, remove them, rinse under a tap and reassemble. To remove the upper or middle arm, unscrew the collar counterclockwise. To remove the lower arm unscrew the collar clockwise.

6.5 Preparing the unit for shipping

If preparing the unit for transport or storage, waste water should be removed from the sump. Waste water in the unit may contain biological contaminants. From the Setup menu, select the Prepare for Shipping function.

Use a mechanical means or absorbent material to siphon the contents from the sump. Wear disposable rubber gloves. Dispose of absorbent material according to biological waste disposal regulations.

6. Care and Maintenance

6.6 Annual maintenance

If the message “Preventative Maintenance Required. Call for Service” appears, the annual maintenance is required. To continue using the HYDR*IM*, press OK. Call for service as soon as possible. The annual maintenance should be done after 365 days have elapsed since the initial installation or since the last service call was performed.

When	Who	What Tests
Daily tests and checks	By the user	• door lock check • wash arm rotation check • door seal check • load carrier check • check and clean chamber filters • visual examination of each load for residual soil.
Annually	By a SciCan-approved technician	• Annual maintenance schedule as outlined in the service manual
Bi-Annually	By a SciCan-approved technician	• Re-validation if required by local regulations.

To ensure that the ongoing efficacy of the machine is assured, SciCan recommends that the following periodic testing protocols are observed.

IMPORTANT NOTES:

- This document outlines the minimum requirements to ensure that the equipment performs to specification. In some regions, local/national guidance documents may require additional testing. Please contact your dealer or local medical authorities for details.
- Installation, commissioning, annual servicing MUST be undertaken by SciCan approved technicians. Failure to maintain this equipment may invalidate the results of the following testing regime.

6. Care and Maintenance

Tests to be performed by the user:

Door lock check

This test is to ensure that the door cannot be opened while a cycle is running or a cycle will not start with the door open. To check that these features are working correctly, attempt to open the door using the handle immediately after a cycle has started. **Caution – DO NOT attempt this when the wash arms are rotating and/or the water is above ambient temperature.** The door should not open. When you attempt to start a cycle with the door open, the cycle should not start. If the unit fails this test, stop using it immediately and call your dealer for technical service.

Wash arm rotation check

Run a P1 cycle and check that wash arms are rotating. If wash arms are **not** rotating, remove, visually check and clean as described in Section 6.4.

Door seal check

Visually check the door seal for debris or wear. If the seal is worn or damaged, call your dealer for technical service.

Load carrier check

Visually check load carriers (trolleys) for wear and tear, damage and that the runners move freely over their full range.

Chamber filter check

Remove, visually check and clean as described in section 6.4.

Load check

Visually inspect each load for residual soil. Washers are designed to ensure that the surfaces of instruments are free from debris that may compromise the sterilization process. A visual check of the instruments processed in each load should be undertaken prior to sterilization to ensure that no residual debris is present on the instrument.

If debris is still apparent, the instrument should not be considered clean and should be reprocessed through the HYDR*IM* again prior to sterilization.

Note: Some set-able materials such as cements, amalgam, and composites, if set on the instrument will not be removed in a HYDR*IM*. If these materials are noticed on the instrument then abrasive removal may be required.

7. Troubleshooting

Problem	Possible Causes and Solutions
Instruments are not clean	• Do not overload cassettes or instrument baskets. • Do not load too many cassettes into the HYDR*IM*. • Use the Heavy Duty cycle for cassettes and hinged instruments. • Check filters and wash arms for debris.
Touchscreen / Unit does not come on	• Ensure that the power button is turned ON. • Ensure that the plug is properly inserted into the wall socket. • Check if a fuse or circuit is blown – call service for assistance.
The wash arms do not rotate	• Remove the wash arms, clean and reinstall them.
The door cannot be opened	• The cycle is not complete. • The cycle was aborted and the unit has not completed draining yet.
Operating cycles appear to be taking too long to complete	• The water is not hot enough. Check that the incoming hot water temperature is in the recommended range. • Check that the hot and cold hoses are not reversed.
“No detergent” message comes on when there is still chemical left in the container	• Check for a kink in chemical tubing.
Drying Performance is inadequate	• Increase the drying time (user menu).

NOTE: Fuses should ***NOT*** be replaced by the operator. Call an authorized service technician for assistance.

7. Troubleshooting

Error Messages

Error	Cause	Solution
CF1 Water Heating failure	The water does not reach the required temperature in the specified time	Call for service.
CF2 Chamber Filling Failure	The water does not fill the chamber within the specified time.	Check that the water hoses are not kinked. Open the water shut-off valves.
CF3 Chamber temperature reading failure	Faulty sensor.	Call for service.
CF4 Draining failure	Water cannot drain from the unit.	Check that the drain hose is not kinked. Check that the filter in the bottom of the chamber is not obstructed.
CF9 Software or PCB Failure	Cycle length is more than 3hr 30 min.	Call for service.
CF14 Water Temperature too high	Water in prewash stage too hot.	Check water connections at back of unit.
CF19 Pressure Sensor	Pressure sensor is stuck.	Call for service.
CF21 No detergent	Flow switch did not detect detergent during wash phase.	Replace detergent box if empty. If the problem persists, call for service.
CF28 No water pressure	Not enough water during cycle.	Check water hoses are not kinked. Open water shut-off valves. Check for leaks. Call for service.

8. Specifications

Height, freestanding: 850 mm / 33.5”

Width: 600 mm / 23.75”

Depth: 600 mm / 23.75”

Depth with door open: 1200 mm / 47”

Weight: 80 kg / 176 lbs.

Maximum Running Noise: 78 dB(A)

Hot and cold water connections: 3/4”

Inlet water pressure: 1-10 bar

Incoming hot water temperature: 50-70°C / 122-158°F

Drain: 3/4”

Water softener: 1 kg / 2.2 lbs salt capacity

Filling System: 5.5L / 1.5 gallon safety maximum

Drying System: Heater 1 kW

Electrical Connection: 208-240 V 60 Hz 15 A

Equipment pollution degree: Pollution Degree 2

Equipment installation category: Installation category II

Maximum relative humidity: 80% for temp up to 31°C / 88°F
50% for temp up to 40°C / 104°F

Operating temperature range: +5°C to 40°C / 41-104°F

Max. altitude: 2000m / 6561.7 ft.

Mains supply: + / -10% of nominal

9. Serial Number Plate

When ordering supplies, spare parts or requesting service, please ensure that the information contained on the serial number plate is available (Model number, serial number etc.).

The serial number plate is located at the bottom left on the rear panel of the HYDR*IM* L110w G4 unit. A small label is located on the left hand side of the chemical door.

10. Warranty

Limited Warranty

For a period of one year, **SciCan** guarantees that the **HYDR*IM* L110w G4**, when manufactured in new and unused condition, will not fail during normal service due to defects in material and workmanship that are not due to apparent abuse, misuse, or accident. In the event of failure due to such defects during this period of time, the exclusive remedies shall be repair or replacement, at **SciCan's** option and without charge, of any defective part(s), provided **SciCan** is notified in writing within thirty(30) days of the date of such a failure and further provided that the defective part(s) are returned to **SciCan** prepaid.

This warranty shall be considered to be validated, if the product is accompanied by the original purchase invoice from the authorized **SciCan** dealer, and such invoice identifies the item by serial number and clearly states the date of purchase. No other validation is acceptable. After one year, all **SciCan's** warranties and other duties with respect to the quality of the product shall be conclusively presumed to have been satisfied, all liability therefore shall terminate, and no action or breach for any such warranty or duty may thereafter be commenced against SciCan.

Any express warranty not provided hereon and any implied warranty or representation as to performance, and any remedy for breach of contract which, but for this provision, might arise by implication, operation of law, custom of trade or course of dealing, including any implied warranty of merchantability or of fitness for particular purpose with respect to all and any products manufactured by **SciCan** is excluded and disclaimed by **SciCan**.

To register your product warranty with **SciCan**, go to Scican.com, click on the appropriate country, and then click on the Register Your Warranty tab.